

ABSTRACT

Noise floor searching is performed for a cellular base station to increase accuracy of receiver gain estimates. This allows adjustment of gain in a radio module to account for gain in front-end devices, and achieve a desired overall receiver target gain. The gain of the RF front-end devices is estimated based on the difference between measured Rx noise power at a receive port of the radio module and the noise floor of the radio module. In one embodiment, frequency sweeping across a receive band using a narrowband filter is done to search for minimum noise power. Interference detection may also be employed to increase awareness of any interfering signals that are presented at a configured channel. It is determined whether the interference is wideband or narrowband.